REMARKS

Claims 1 to 12 are pending. Claims 1-3 are currently amended. Claim 1 has been amended to remove the phrase "which hardens upon radiation exposure or heating" which is redundant. Claim 2 had been amended to remove the phrase "becomes fluid upon heating and hardens upon exposure to radiation or upon heating to a temperature higher than the fluidizing temperature" which is also redundant. Additionally, claim 2 has been amended to provide antecedent basis for "fluidizing temperature". Claim 2 has also been amended to recite that the surface protection layer is heated to its fluidization temperature to make it effectively fluid and that hardening the surface protecting layer is done "upon exposure to radiation or upon heating to a temperature of 100°C or greater." Support for this amendment can be found, for example, page 13, line 19. Claim 3 has been amended to depend upon claim 2. Reconsideration of the application is requested.

§ 103 Rejections

Claim 1 stands rejected under 35 USC § 103(a) as purportedly being unpatentable over Oka (US 6551906) in view of Fan (5300788). The Examiner's position is that Oka teaches a semiconductor surface protecting method whereby the circuit side of a semiconductor wafer is protected during the step of back side grinding of the wafer comprising joining the circuit side (front surface [surface at which semiconductor elements are found]) of said wafer to a polymeric film material (tape substrate) via a fluid surface protecting layer (adhesive), and grinding said wafer, wherein grinding said wafer is done after hardening said surface protecting layer. The Examiner admits that Oka does not teach that the UV resin hardens upon radiation exposure. The Examiner asserts that Fan teaches a UV curable epoxy which hardens when exposed to UV light and that the use of such an epoxy allows for selectively transforming the material to a solid state and removing the material leftover which has not been transformed. Thus, certain areas can be masked. The Examiner further asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to append the teachings of Fan to the teachings of Oka.

The Applicant respectfully traverses for at least the following reasons. For clarification, the Applicant has amended claim 1 to remove ambiguity. As established in previous responses such as, for example, the response to the Office Action dated March 26, 2009, the Examiner has

not shown that Oka teaches or suggests that the grinding is done after hardening said protecting layer as required by Applicant's claim 1 (emphasis added). The Applicant emphasizes that claim 1 is a method claim and, since explicitly stated in the claim, the order of steps is important in the inventive method of the instant claim. The Examiner has not shown where in Oka it is taught that grinding said wafer is done after hardening said surface protecting layer (emphasis added). Oka (col. 3, lines 35-49) teaches a protective tape 2 for back grinding formed by the tape substrate 21 and the adhesive 22. A tacky resin, a UV-curing resin or a thermoplastic resin may be used for the adhesive 22. Protective tape 2 is adhered to the front surface of the wafer 1.

Furthermore, Oka teaches that the wafer is cut (subjected to back side grinding – col. 3, lines 47-49), that a tape-shaped adhesive 6 for dice bonding (not the surface protecting layer) is adhered to the reverse surface of the wafer (col. 3, lines 50-55) and then the protective tape for back grinding is peeled off after being irradiated with UV light (col. 3, lines 60-62). Thus, Oka teaches grinding and then irradiating the UV resin with UV light. Or, taken as a whole, Oka teaches adhering the surface protecting layer to the wafer, grinding the wafer, and hardening the wafer to lower its adhesiveness. In contrast, Applicant's claim 1 requires joining (adhering) a wafer to a fluid surface protecting layer, hardening the layer and then grinding the wafer. The grinding is done after hardening the surface protecting layer. Thus, the Examiner has not shown that Oka teaches all of the limitations of Applicant's claim 1.

The Examiner is relying on Fan for the missing elements of claim 1. The Examiner admits that Oka does not teach that the UV resin hardens upon exposure to radiation and asserts that Fan teaches a UV curable epoxy which hardens when exposed to UV light. The Applicant does not dispute the fact that UV curable resins can harden when exposed to UV light. However, the Examiner has not shown that Fan teaches or suggests a semiconductor surface protecting method whereby grinding of the wafer is done after hardening the surface protecting layer (UV curing resin) as required by Applicant's claim 1. Thus, the combination of Oka and Fan do not teach or suggest all of the limitations of Applicant's claim 1. As such, the Examiner has not made a *prima facie* case of obviousness as required by MPEP §2142. For at least this reason, the rejection is improper and should be withdrawn.

Claim 2 stands rejected under 35 U.S.C. 103(a) as purportedly being unpatentable over Oka (US 6551906), in view of Fan (5300788), in view of Morita (5516858). Claim 2 has been amended to provide antecedent basis for "fluidizing temperature" and to state that hardening occurs upon heating to a temperature of 100°C or greater. Support is shown above. The Applicant has already established above that the Examiner has not made a *prima facie* case of obviousness for amended claim 1 for Oka in view of Fan since the combination of Oka and Fan do not teach that grinding the wafer is done after hardening the surface protecting layer (emphasis added). Amended claim 2 also contains this limitation. Furthermore, in the Applicant's response filed on May 26, 2009, the Applicant has already established that the Examiner has not made a *prima facie* case of obviousness for claim 2 under 35 U.S.C. 103(a) as purportedly being unpatentable over Oka (US 6551906) in view of Morita (5516858) since Oka does teach that grinding the wafer is done after hardening the surface protecting layer (emphasis added) and, as discussed above, neither does Fan. Thus, the combination of Oka, Fan, and Morita do not teach or suggest all of the limitations of Applicant's amended claim 2. As such, the Examiner has not made a *prima facie* case of obviousness as required by MPEP §2142. For at least this reason, the rejection is improper and should be withdrawn.

Claim 3 stands rejected under 35 U.S.C. 103(a) as purportedly being unpatentable over Oka (US 6551906), in view of Fan (5300788), in view of Morita (5516858). After discussion with the Examiner, the Applicant has amended claim 3 to depend upon amended claim 2 and add further limitations thereto. Since amended claim 2 is now allowable, likewise is amended claim 3

Claims 4-6, 9, and 10 stand rejected under 35 U.S.C. 103(a) as purportedly being unpatentable over Oka/Morita/Fan (based upon the text of the rejection, the Applicant is assuming that the Examiner meant "Oka/Fan/Morita" and will respond with this understanding and further in view of Hosomi (5726219). Claims 4-6, 9, and 10 ultimately depend upon claim 3 and add further limitations thereto. The Applicant has already shown that the combination of Oka, Fan, and Morita do not teach all of the limitations of Applicant's amended claim 3. The Examiner has asserted that Hosomi teaches a resin which contains the components necessary to form phenol-novolac epoxy (meth)acrylate resin. But the Examiner has not shown that Hosomi

teaches or suggests the missing limitations (grinding after hardening) of Applicant's amended claim 3. As such, the Examiner has not shown that the combination of Oka, Fan, Morita, and Hosomi teaches or suggests all of the limitations of Applicant's claims 4-6, 9, or 10 as required by MPEP § 2142 to establish a *prima facie* case of obviousness. As such, the rejections of claim 4-6, 9, and 10 are improper and should be withdrawn.

Claims 7 and 8 stand rejected under 35 U.S.C. 103 (a) as purportedly being unpatentable over Oka/Morita/Fan as applied to amended claim 3 above, and further in view of Komiyama. Claims 7 and 8 both depend upon amended claim 3 and add further limitations thereto. The Examiner has stated that Komiyama teaches the use of an adhesive tape which is composed of phenol-novolac epoxy resin and has adhesive/releasing properties which are well-balanced. However, the Examiner has not shown that Komiyama teaches or suggests a surface protecting layer useful in the method of amended claim 2 upon which claims 7 and 8 depend. As such, the Examiner has not shown that the combination of Oka, Fan, Morita, and Komiyama teaches or suggests all of the limitations of Applicant's claim 3 upon which claims 7 and 8 ultimately depend. As a result the Examiner has not made a proper *prima facie* case of obviousness as required by MPEP § 2142 and therefore the rejections are improper and should be withdrawn.

Claims 11 and 12 stand rejected under 35 U.S.C. 103 (a) as purportedly being unpatentable over Oka/Morita/Fan/Hosomi as applied to claim 4 above, and further in view of Komiyama. Claims 11 and 12 ultimately depend upon amended claim 3. As stated above, the Examiner has not shown that any of the secondary references—Morita, Fan, Hosomi, or Komiyama teach or suggest a surface protecting layer that is useful in the method as recited in amended claim 2 upon which amended claim 3 depends. As such, the Examiner has not made a proper *prima facie* case of obviousness as required under MPEP § 2142 and the rejections are therefore improper and should be withdrawn.

Telephonic Interview

The Applicant wishes to thank Examiner Caleb Henry for the telephonic interview of the case held on January 26, 2010. During the interview the merits of the case were discussed. The

amendments presented herein were discussed with the Examiner and it was agreed that these amendments would put the case into condition for allowance at least with respect to the current rejections.

In view of the above, it is submitted that the application is in condition for allowance.

Examination and reconsideration of the application as amended is requested.

Respectfully submitted,

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Date

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